

**Public Lecture organized by Prof. W. K. Chow, Dept. BSE –  
“The Family Tree of Air Distribution Systems”  
By Prof. Peter Vilhelm Nielsen, Aalborg University, on 27 July 2011**

A 75-minute public lecture given by Professor Peter Vilhelm Nielsen, Aalborg University, Denmark was held on 27 July. The topic was “The Family Tree of Air Distribution Systems”.

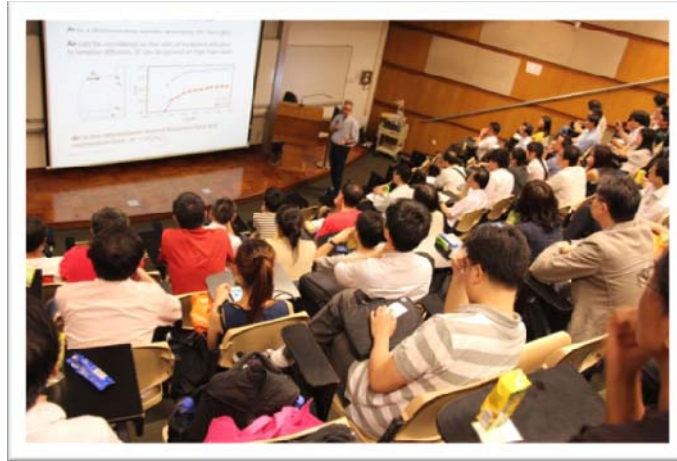


Professor Nielsen

Professor Peter V. Nielsen is the esteemed author of numerous innovative and authoritative papers, articles and books on the air movement in rooms, energy flow in buildings, control equipment and integrated product development. He is a member of International Academy of Indoor Air Science (IAIAS) and ASHRAE fellow.

The professor was also one of the first people in the world to employ Computational Fluid Dynamics (CFD) inside an indoor environment as early as in 1973.

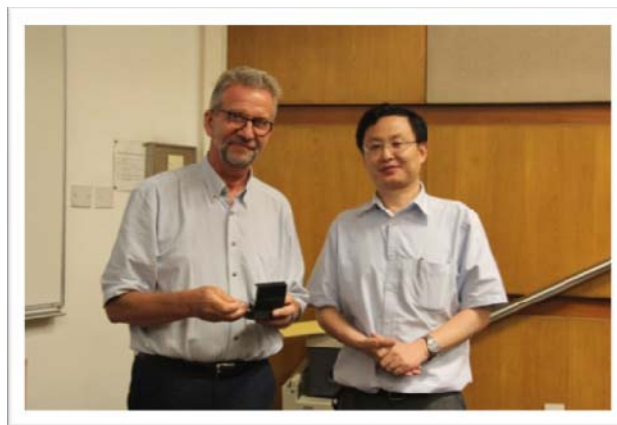
For his lifelong achievements and invaluable contribution to the scientific field of building services engineering, he has received John Rydberg Gold Medal, REHVA's Ole Fanger award in Science and the Order of Knight of Dannebrog in his home country.



Full room of apt audience

In the lecture the professor expanded on his theory that air distribution in a room may be structurally described by the Archimedes number, the geometry of the room, the geometry of the supply and return openings and other boundary conditions including heat and cooling loads.

The learnt professor hosted an extensive and richly informative discussion on all air distribution systems on the basis of this structure, the capacities and qualities of different systems, and their interconnections as part of a “family tree”. The family tree structure, as the professor believes, will allow and aid selection of an optimal system for a given application, as well as enable identification of new innovations.



Presentation of souvenir by Prof. J.L. Niu

Professor Nielson’s lecture left the audience with a vivid impression of the interconnected histories and developments of air distribution systems in addition to their different qualities. A combination of extremely precise and cautious scientific logical proceedings and greatly daring creative imagination, the lecture provided us with a sweeping view of how an innovative approach may aid in practical selection of the best air distribution system for industry.